

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of operation of a ~~networked first~~ device in a network having ~~at least one other device~~ a plurality of devices including the first device and a second device, the method comprising acts of:

    sending a simple device description query message to the ~~at least one other~~ second device requesting a simple device description;

    receiving from the ~~at least one other~~ second device a simple device description message of defined length including a device type value representing the type of the ~~at least one other~~ second device;

~~if an extended device description is required by the network device,~~ sending a query message to the ~~at least one other~~ second device requesting an extended device description from the ~~at least one other~~ second device ~~if~~ when the simple device description

indicates that the extended device description is available and the extended device description is required by the first device, otherwise and not sending the query message to the at least one othersecond device requesting the extended device description when at least one of the simple device description indicates that the extended device description is not available and the extended device description is not required by the first device; and

if the extended device description is available on the at least one other device, receiving from the at least one othersecond device the extended device description of variable length when the extended device description is available on the second device and an extended device description is required by the first device.

2. (Currently amended) The method according to claim 1, further comprising an act of establishing the network address of the at least one othersecond device before the act of sending a simple device description to the at least one othersecond device.

3. (Currently amended) The method according to claim 1 or 2, wherein the simple device description message is in the form of a

token-compressed message compressed from a human-readable message format, the simple device description message including a device type value representing the device type of the ~~at least one~~ othersecond device; the device type value being selected from a device type hierarchy having predetermined top level elements including a controller device type and a basic device type, and at least one further level of subsidiary device types depending from the basic device type and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type.

4. (Currently amended) The method according to claim 3, wherein the ~~networked~~ first device is a controller device comprising a list of device types that the controller can control.

5. (Currently amended) The method according to claim 4, the method further comprising an act of determining whether the ~~networked~~ first device can control the ~~at least one othersecond~~ device by: determining the lowest level of device type that either is the

device type of the ~~at least one other~~second device or is a higher level device type from which the device type of the ~~at least one other~~second device depends, in the list of device types that can be controlled by the controller, to determine the extent to which the ~~networked first~~ device can control the ~~at least one other~~ second device.

6. (Previously presented) The method according to claim 5, further comprising acts of:

receiving a controller query message including a requested device type value to request whether the controller is able to control a device of the requested device type; and

responding with a controller response message including a device type value representing the lowest level of device type in the list of device types that either is the requested device type or is a higher level device type from which the requested device type depends.

7. (Currently amended) The method according to claim 2, wherein the predetermined top level elements in the device type hierarchy

further include a composite device type, and the ~~networked~~-first device is of the composite device type having the functionality of an integer number of other devices, the method further comprising an act of:

responding to a received simple device description query message by sending a simple device description message including the device type value representing the device as a composite device and further an integer sub-device number being the number of other devices.

8. (Currently amended) A method of operation of a ~~networked~~-first device to communicate with at least one of a plurality of second devices, the method comprising acts of:

receiving a simple device description query message from one of the plurality of second devices requesting a simple device description;

sending to the one of the plurality of second devices, a simple device description message of defined length including a device type value representing a type of the ~~networked~~-first device;

receiving an extended device description query message from the one of the plurality of second devices requesting an extended device description from the ~~networked~~ first device ~~if when~~ said one of the plurality of second devices requires ~~an the~~ extended device description; and

~~if sending~~ the extended device description of variable length ~~is available sending to the one device of the plurality of second devices~~ an extended device description of variable length when the extended device description is available on the first device and the extended device description is required by the one of the plurality of second devices.

9. (Currently amended) A ~~networked~~ first device including a transceiver for sending and receiving messages and a message handler arranged in a communication network with a plurality of second devices, the ~~networked~~ first device being configured to perform acts of:

in response to receiving a simple device description query message from one of the plurality of second devices, sending to the one of the plurality of second devices, a simple device description

message of defined length including a device type value representing a type of the ~~networked~~ first device and indicating whether an extended device description is available; and

in response to receiving an extended device description query message from an other one of the plurality of second devices, sending to the other one of the plurality of second devices, an extended device description of variable length ~~if~~ when the extended device description is available, ~~otherwise ignoring~~ and not sending the extended device description query message in response to receiving the extended device description query message from the other one of the plurality of second devices when the extended device description is not available.

10. (Currently amended) The networked device according to claim 9, wherein the simple device description message is in the form of a token-compressed message compressed from a human-readable message format, the simple device description message including a device type value representing the type of the ~~other device~~ one of the plurality of second devices, the device type value being selected from a device type hierarchy having predetermined top level

elements including a controller device type and a basic device type, and at least one further level of subsidiary device types depending from the basic device type and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type.

11. (Currently amended) A ~~networked~~first device, including a transceiver for sending and receiving messages and a message handler arranged in a communication network with a plurality of second devices, the ~~networked~~first device being configured to perform acts of:

sending a simple device description query message to one of the plurality of second devices requesting a simple device description;

receiving from the one of the plurality of second devices, a simple device description message of fixed length including a device type value representing a type of the one of the plurality of second devices and a field indicating whether an extended device description is available;



testing the simple device description message to determine whether an extended device description is available;

sending an extended device description query message to the one of the plurality of second devices requesting an extended device description ~~if~~ when the testing of the simple device description message indicates that there is an extended device description; and

receiving from the one of the plurality of second devices the extended device description of variable length ~~if~~ when the extended device description is available.

12. (Currently amended) The ~~networked~~ first device according to claim 11, wherein the simple device description message is in the form of a token-compressed message compressed from a human-readable message format, the simple device description message including a device type value representing a type of the ~~another device~~ one of the plurality of second devices, the device type value being selected from a device type hierarchy having predetermined top level elements including a controller device type and a basic

device type, and at least one further level of subsidiary device types depending from the basic device type and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of the subsidiary device types depending from the controller device type.

13. (Currently amended) The ~~networked~~-first device according to claim 12, wherein the ~~networked~~-first device has the controller device type, wherein the ~~networked~~-first device comprises a list of device types that can be controlled by the ~~networked~~-first device, so that the ~~networked~~-first device can determine ~~the~~-an extent to which the ~~networked~~-first device can control another device by determining ~~the~~-a lowest level of device type that either is the device type of the one of the plurality of second devices or is a higher level device type from which the device type of the one of the plurality of second devices depends.

14. (Currently amended) The networked device according to claim 13, wherein the message handler is arranged:

to receive a controller query message from a third device including a device type value to request whether the controller is able to control a device of the ~~requested~~ third device type; and

to respond with a controller response message including a device type value representing the lowest level of device type in the list of device types that either is the ~~requested~~ third device type or is a higher level device type from which the ~~requested~~ third device type depends.

15. (Currently amended) A system comprising:

a plurality of networked devices each having a transceiver for sending and receiving network messages;

at least one networked device of the plurality of networked devices being arranged to send a simple device query message to other devices of the plurality of networked devices and to receive and interpret simple device description messages subsequently received from the other devices of the plurality of networked devices;

the at least one networked device of the plurality of networked devices being arranged to send an extended device query

message to other networked devices and to receive and interpret extended device description messages subsequently received from the another other networked devices;

each of the networked devices being arranged to respond to an incoming simple device query message from an other of the plurality of networked devices by sending a simple device description message of defined length including a device type value representing the type of the responding networked device and indicating whether an extended device description is available; and

at least a first one of the networked devices is arranged to respond to an incoming extended device query message from an other a second one of the plurality of networked devices by sending an extended device description message if when the extended device description is available, otherwise ignoring and not sending the extended device description query message in response to receiving the extended device description query message from the second one of the plurality of second devices when the extended device description is not available.

16. (Previously presented) The system according to claim 15, wherein the plurality of networked devices includes at least one simple device without the capability to decompress messages and interpreting directly compressed messages and at least one complex device including a message decompression arrangement for decompressing the messages and a message interpreter for interpreting the decompressed messages.

17. (Previously presented) The system according to claim 15 or 16, wherein the predetermined top level elements further include a composite device type; the system includes at least one networked device of the composite device type having the functionality of a predetermined number of other devices, the predetermined number being an integer greater than or equal to 2; and each of the at least one networked device of the composite device type responds to an incoming device query message requiring a simple device description by sending a simple device description including the device type as a composite device and a sub-device number representing the predetermined number of other devices.

18. (Previously presented) A computer program for controlling a networked device, the computer program being arranged to cause the networked device to carry out the acts of a method according to claim 1.

19. (Currently amended) A computer program for controlling a ~~networked~~ first device, the ~~networked~~ first device having a transport stack and an application, the computer program comprising:

code implementing a transport adaption layer for interfacing with the transport stack;

code implementing an application programming interface for interfacing with the application; and

code implementing a messaging layer including the capabilities of sending and receiving messages in a token-encoded human readable messaging format, the code being arranged to cause the ~~networked~~ first device:

to recognize incoming device query messages requiring a simple device description response and to provide a simple device description response including a device type; and

to recognize incoming device query messages requiring an extending device description and to respond with an extended device description if when the extended device description is available, otherwise ignoring the incoming device query messages and not respond with the extended device description when the extended device description is not available.

20. (Previously presented) The computer program according to claim 18 or 19 recorded on a data carrier.

21. (Currently amended) A method of utilizing a network establishment and management protocol for controlling a plurality of electronic devices, the method comprising acts of:

providing a compression algorithm defining the mechanism for compression of said messages;

defining a generic message format, the messages being compressed XML compliant messages; and

defining message sequencing requirements, wherein said plurality of electronic devices include at least one device capable of recognizing only a compressed message and providing only a

simple value to represent a description of its type, wherein said plurality of electronic devices include at least ~~one other~~ a first device capable of ~~recognizing~~ decompressing the compressed message and providing an extended device description ~~if~~ when the extended device description is available and at least a second device not capable of decompressing the compressed message, and wherein the compressed message indicates ~~if~~ whether the extended device description is available.

22. (Currently amended) A system utilizing a network establishment and management protocol for controlling a plurality of electronic devices, the system comprising:

a mechanism for compression of messages in accordance with a compression algorithm;

a means for defining a generic message format, the messages being compressed XML compliant messages; and

a means for defining message sequencing requirements, wherein said plurality of electronic devices include at least one device capable of recognizing only a compressed message and providing only a simple value to represent a description of its type, wherein said



plurality of electronic devices include at least one other device capable of recognizing the compressed message and providing an extended device description ~~if~~ when the extended device description is available, and wherein the compressed message indicates ~~if~~ whether the extended device description is available.